C. BARRETT.
Freight-Car.

No. 224,984. Patented Mar. 2, 1880.

Fig. 1.

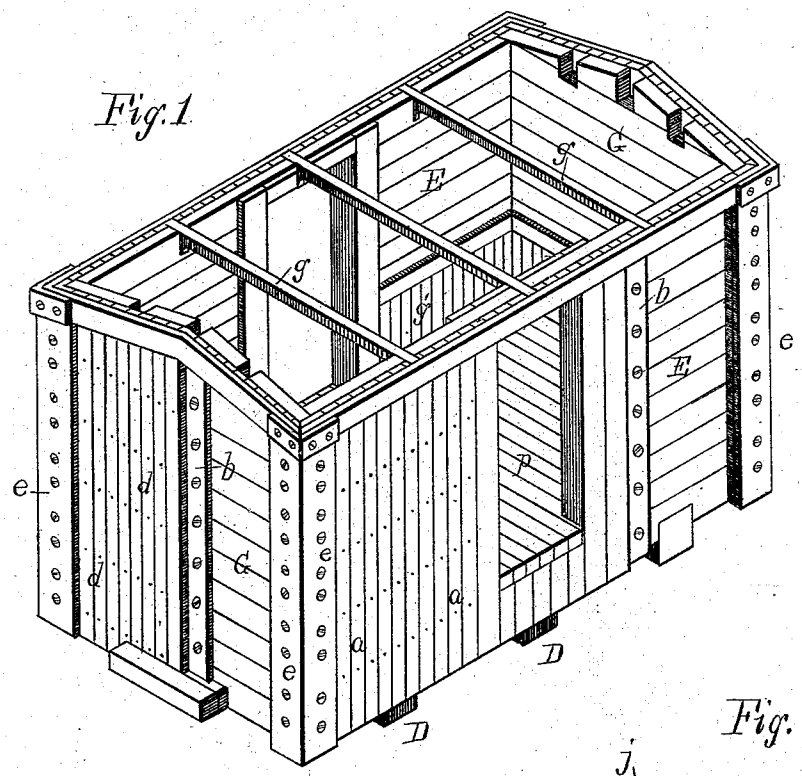
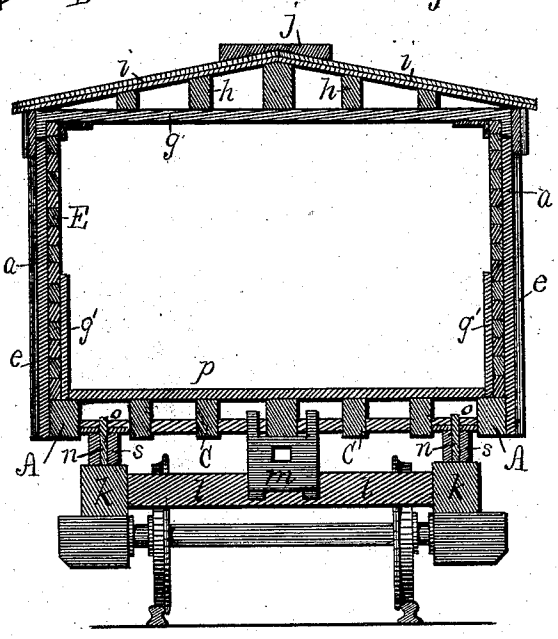


Fig. 2.



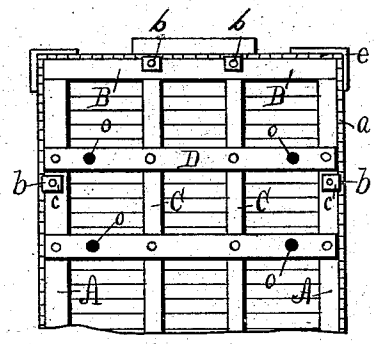


Fig. 3.

Witnesses.
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CHARLES BARRETT, OF SOMERVILLE, MASSACHUSETTS.

FREIGHT-CAR.

SPECIFICATION forming part of Letters Patent No. 224,984, dated March 2, 1880.

Application filed November 28, 1879.

To all whom it may concern:

Be it known that I, CHARLES BARRETT, of Somerville, in the county of Middlesex and State of Massachusetts, have invented certain Improvements in Railway Freight-Cars, of which the following is a specification.

This invention relates to the manufacture of railway freight-cars, whereby greater economy of material and lightness and strength in construction are obtained; and it consists in dispensing with the ordinary upright frame now employed, to which the boarding is secured, and combining the boarding and inside sheathing in manner as hereinafter explained, the whole being tied by upright metal ties and angle-iron corners, also as hereinafter explained.

In this car I dispense with swiveled four-wheeled trucks, and employ but one pair of wheels at each end of the car, the boxes which support the journals of the axles being situated near the ends of the car and properly secured to the truck-frame, such journals being permitted sufficient end play in the boxes to adapt themselves to the change in position when the car is traversing a curve in the track.

The drawings accompanying this specification represent, in Figure 1, a perspective view, and in Fig. 2 a cross-section, of a car embodying my improvements, the roof of the car being removed in the former figure. Fig. 3 is a plan of car-bottom.

In such drawings the car-body is represented as having a floor-frame composed of side rails or sills, A A, and end rails or sills, B B, with intermediate longitudinal and lateral tie-rails, C C and D D.

The longitudinal main boards of the sides of the car are shown at E E as resting one upon the other, and the whole erected upon the side sills, so that the outer faces of all are flush. The horizontal main boards of the ends of the car are shown at G G, also as placed one above the other, and the whole resting upon the end sills, while the end boards overlap the ends of the side boards, and thereby provide longitudinal strength and stiffness to the car. The outside vertical sheathing-boards of the sides of the car are shown at *a a* as covering the longitudinal side boards and the side sills, while between the two series of boards I employ vertical metallic tie rods or bars *b b*, which are securely bolted or otherwise secured to such longitudinal boards, and are formed at the bottom with a turn or lip, *c*, which extends inward beneath the side sills, as shown in Fig. 3 of the drawings, and are securely bolted to the sills. The upright side sheathing-boards cover the joints between the side and end horizontal boards, and are in turn overlapped at the corner of the car by the vertical end sheating-boards, which are shown at *d d*. Furthermore, I strengthen the corners of the car by vertical angle-plates *e e*, which are placed outside the outer sheathing-boards, and are securely bolted or screwed in place.

I employ in each end of the car vertical metallic tie rods or straps *b b*, as in the case of the sides, while to prevent possibility of spreading of the side of the car at the top I employ horizontal cross ties or bars *g g*, which span the car laterally, and are formed at the ends with U-shaped heads to straddle or overlap the outer sheathing-boards, as shown in Fig. 1 of the drawings.

The lower part of the interior of the car is protected by short upright sheathing-boards *g' g'*. The floor-boards are shown at *p p* as put in place after the walls are completed, and tend to prevent misplacement of the boards of such walls.

The roof of the car is shown as composed of longitudinal beams *h h*, which are let into the end walls of the car, and with lateral boards *i i*, surmounted by a central longitudinal ridge, *j*.

The truck of the car is a single one, and extends the whole length of the car-body, being composed of longitudinal side beams, *k k*, and end ties or beams, *l l*, while a central perch, which constitutes the draw-bar, is shown at *m*, and extends the whole length of the truck.

The body of the car is secured to or upon the side truck-rails by vertical posts *n n*, which enter corresponding sockets *o o* in the under side of the side sills of the car-body, the springs *s s*, upon which such sills rest, being interposed between them and the side beams of the truck.

By my construction of car I am enabled to obtain a very long wheel-base, which prevents tilting or jumping of the ends of the car, and as the journals are allowed end play in the boxes, the torsion and binding of the wheels

to which four-wheeled trucks are liable is avoided, and less friction ensues between the car and rails, which enables the car to be drawn with less expenditure of power.

In the event of a car leaving the track, it is much easier replaced in my construction than with a swiveled truck, as the wheels are always in alignment with the greatest length of the car, and not at an angle to or crosswise of the same, as is frequently the case with a swiveled truck.

What I claim as new, and desire to secure by Letters Patent, is—

1. A car-body constructed of the horizontal sheathings E G, protected on the inner side by the vertical wainscoting *g'*, extending one-half its entire height, and secured and strengthened upon the outer side by the vertical metallic rods or straps *b b*, in combination with the vertical outer sheathing, *a d*, and the angle-plates *e e*, substantially as set forth.

2. The vertical ties as disposed between the horizontal and vertical boardings, and having a lip at bottom to overlap the under side of the floor-sill, substantially as and for purposes stated.

3. The cross-tie *g*, formed so as to securely clamp the two sides of a car, in combination with the longitudinal beams *h h*, graduated from the center, lateral boarding *i i*, and central longitudinal ridge, *j*, substantially as described.

CHARLES BARRETT.

Witnesses:
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